Psychological Aspects of Atomic Disaster

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• Increasing attention to the psychological aspects of atomic disaster will help improve the ability of the citizens of this country to withstand attack and survive as a free people. Since an enemy may be expected to exploit any internal weaknesses it can find, preparation must be made against the onslaught. The ability to deal effectively with any situation, even the most awesome, depends on knowledge of what to expect, and there is no reason to believe that facts about atomic disaster are an exception to this time proven truth.

The psychological aspects need to be considered from two points of view, namely, the effect on masses of people and on individuals.

THE PSYCHOLOGICAL, emotional and spiritual resources of our country are going to be of critical importance to our very survival should atomic war reach us. The efforts put forward during the late war toward keeping morale high on the home front in order to produce sufficient material for fighting forces will seem as nothing against the tasks to be expected. Any discussion of the psychological aspects of atomic warfare as well as bacteriological and chemical warfare must include the maintenance of an effective level of common purpose and state of mind which maintains a will to resist the enemy. Secondly, such a discussion must concern itself with the expeditious handling of psychiatric casualties as they occur.

Psychiatrists, along with practitioners in other fields of medicine, stand ready to bring the accumulation of psychiatric knowledge to bear upon the peculiar problems of total warfare. Clinical entities come into being which are almost never seen in civilian life. Psychiatry is predominantly a clinical science, and fortunately clinics have not been filled to date with the kind of reactions to be anticipated in the event of a bombing. Consequently the writings of others who have reported experiences such as those to be expected must be turned to. The best organized reports of experience concerning men under this kind of stress came from the armed forces of the United States during World War II. Also available are observations of civil populations in other countries during the late war, as well as data from disasters that have affected our own population.

PANIC

Panic is a sudden, overpowering fright that removes all reason and the ability to take effective action. This terror is frequently brought about by a misinterpretation of dangers, especially when it is accompanied by frantic attempts to secure safety. It can occur in the presence of real or imminent danger, but it also occurs when real danger is very slight. In a person it is a reaction to an unbearable situation to which the person is unable to adjust temporarily. In a group it is usually precipitated by mass suggestion and is highly contagious. Thus, panic involves temporary major disorganization of thinking, loss of control over fear and loss of purposeful action.

There are many sad examples of the tragedies brought about by panic far out of proportion to the external events that started them — the Iroquois Theater fire in Chicago in 1903 and the Cocoanut Grove disaster in Boston in which apparently possible escape routes were passed up in mad stampede to jammed exits; the trampling to death of many persons in disaster shelters in Europe during World War II; and the most terrible needless loss of 5,000 lives in a Chungking bomb shelter during the Sino-Japanese war.

It has been estimated that if Manhattan Island were to be bombed and a rumor got started that the Battery was the safest place to be, thousands upon thousands could be pushed into the water by the pressure of masses of people trying to reach the spot. When panic seizes groups of people, no effective action is taken by them, and the best that can be hoped for is that there will be no deaths beyond those that occurred in whatever event started the panic. It is easy to visualize that if panic came quickly during atomic attack, numbers of people might unnecessarily expose themselves to flying debris and radiation which could easily have been avoided by waiting for even short periods before leaving shelter.

Of even greater potential danger, perhaps, is the possibility of the outbreak of mob rule and plundering, and lack of attention to care of the wounded. Then there would be the enormous job of reestab-

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lishing order so that the affected area might contribute to a war effort. Scapegoating also must be expected as an exploit by the enemy's psychological warfare arm—for example, an attempt to disunify the civil populace by spreading rumors that the wealthy conspired to cut short protection against disaster.

PANIC PREVENTION

Necessity for Preparation

By far the most effective steps to prevent panic are those that can be taken now, not after an attack has come. There are those who maintain that full public information on the possible effects of atomic attack would cause so much fright in the populace as to be dangerous in itself, but that position is untenable in the light of recent history.

For instance, in 1938 Barcelona was bombed for a total of 26 minutes by six airplanes and although damage was slight, a million and a half dwellers in the city whirled in panic for 40 hours. This may seem almost comical now, 15 years and several wars later, but it illustrates that people frightened by the unknown can conjure a disaster far worse than any real circumstances warrant. Terrible as the atom bomb is, and realistic as fears of it may be, it is probable that unless the public were adequately prepared, the terror and fear would exceed the facts in the event of attack. Part of the preparation must be public enlightenment concerning the effects and limitations of atomic warfare. Certainly the people should be well acquainted with the fact that there is an overall medical plan and that supplies will be made available. The knowledge that aid is available reduces the feeling of helplessness that produces panic.

Communications

The establishment of communications as soon as possible following the disaster is recognized as being of psychological as well as of practical importance. There will be some radio facilities and use may be made of sound trucks, or some sound equipped helicopters for the most urgent of information to be directed to certain groups within the area. People will not be willing to take chances unless they know that there is a chance of success and they have some idea of where they stand. To prevent panic, the press and radio broadcasters should be deeply impressed with the fact that this is one time that sensationalism can be ruinous to the local effort, to say nothing of the effect it may have in un-bombed areas which might be anticipating attack. Rumors will most certainly get started, rumors such as that all the water is polluted with radioactive material, or that the enemy has landed nearby. Someone has suggested the setting up of an actual rumor clinic to deal with these and much of the necessity for adequate communications will be to "nail" rumors as quickly as possible.

Need for Authority

When the myth of invulnerability, which so many people harbor, has been rudely shattered by a bomb, people will be looking for protective kindly authority. In all installations, whether medical or other, this should be fully appreciated. Just as the masses are subject to "hysterical" following of mass "fear leaders," so can they be guided into imitating admirable qualities. Where leadership is strong, people are more able to control their fears and imitate the seemingly more fearless.

Need for Group Cohesion

After the initial confusion following explosion there will be a great need for a feeling of being together on the part of the people. Obviously, good leadership as everywhere will be of inestimable value. But no group activity can be as valuable in reducing panic and subjective sensations of fear as constructive action. The work of clearing roads for the passage of vehicles or of joining in bucket brigades and the like is necessary. Whenever a job is assigned, it should be assigned to two or more people, even though one might accomplish it, in order to avoid the helpless feeling of being alone in the midst of devastation. The problem in child care will depend largely on the emotional state of the adults about them. It was found in England during the late war that the incidence of common symptoms of insecurity was greater in children who had been removed from their families in London to safe places than it was in children who remained in an area of danger with their parents. Certainly children should be encouraged to help with the work if they are old enough to do so, and nothing will help them to overcome their anxiety more than feeling useful and doing something to reduce tension. Teachers certainly could help in taking care of large groups of children by organizing games or group singing, or even by carrying on makeshift school work.

Evacuation

Evacuation following detonation of atom bombs will have to be planned in order to prevent panicky clogging of all avenues. Public foreknowledge that there is a plan is a prime factor in the successful use of it. The exercise of strong authority is necessary, for military experience has repeatedly demonstrated that retreat can turn into disorganized rout. In the event that large numbers attempt to flee in a disorganized way, certain steps can be taken to bring order. Mobilization depots stocked with food and water can be set up along the routes of egress. As people become fatigued by their attempts to escape they will stop at the depots. There, good leaders with

public address systems can give an accurate account of the nature and extent of the damage. The able bodied persons can be regrouped to return as working parties, or to return to their own areas, depending on the circumstances.

Disaster Workers

The horror engendered by the sight of mass suffering, mutilated bodies and the like is likely to demoralize many of the disaster workers. As yet we do not know enough of what to expect to be able to state positively what qualities are needed for them. Suggestions have been made, however, that they be given an indoctrination course, similar to that given to combat soldiers, in which realistic sound films, approximating as closely as possible the kind of things they may witness, are shown. Since the sight of death and disfigurement around disaster stations and hospitals might undermine morale, it has been suggested that persons certain to die should be kept apart in "death wards."

INDIVIDUAL REACTIONS

In the initial period following the detonation of atom bombs people will be, in various degrees, anxious, fearful, doubt-ridden, apathetic, hysterical, moody, irritable and depressed. Dr. William Menninger compiled observations from all the psychiatrists who took part in relief operations during the Topeka flood of July 10, 1951. It was noted that there was a striking difference between the reaction of those suffering personal damage and those who did not. Those who did not were more obviously anxious and felt relief and even exhilaration on doing something constructive. On the other hand those who did suffer property damage could have saved themselves much of it. Despite adequate warning which came in time there was a reaction of *disbelief*. Indeed, of 10,000 who were forced to evacuate their homes, 3,000 had to be rescued by boat. These people who suffered damage were apathetic and not interested in combating further damage such as saving the water and sewer systems. As their apathy wore off they felt a great need to talk and experienced relief from it. Their anxiety most often was directed at trivial matters such as getting proper food for the dog, or that grandfather would miss a certain radio program. It was as if these people could not yet face squarely their loss and displaced their concern on to matters of little importance. Physicians can expect much of this during disaster which will take the form of concern over minor cuts and bruises, etc. Much time in disaster stations could be saved and relief given by having such persons as ministers assigned for the purpose of letting these people "talk out" some of their anxiety.

Individual psychic distress beyond normal initial reaction of fear probably will not be too apparent in the earliest postdetonation phase. It will occur, however, and is one of the things that physicians must watch for.

Causes

When attack with its destruction and loss of life comes, a natural reaction is to fight back and retaliate. This externalizing of aggressive action is a healthy one under justifiable circumstances because it diverts large quantities of psychic energy from oneself to useful work. Timid passive persons are more vulnerable to fear because they are unable to discharge dammed-up tension by aggressive action. Consequently anxiety tends to build up and become uncontrollable. Conscientious men and women will certainly not be immune to psychiatric breakdown. A person with an overly stern conscience may unnecessarily punish himself for even the unavoidable disastrous episodes which will be common in attack. Such a person should be watched for depressive symptoms and even suicidal tendencies. This kind of reaction might well be seen among parents, wardens, disaster workers and others when they feel their efforts have not been sufficient to save neighbors or family members. At the opposite end of the spectrum of conscience are persons who have so little compelling force of conscience that they will permit themselves to be overcome by fear rather than "carry on." Friendly firmness may be adequate to cope with some of them, but others will have such disabling symptoms as fugue states, paralysis, vomiting and mutism. It is quite conceivable that, in the first turmoil after attack, anxiety ridden incoherent vomiters might be mistakenly thought to be suffering from large doses of radiation.

There is one aspect of combat fatigue, familiar from World War II, that has important implications for civil defense. Combat fatigue was not entirely a problem within a given person, as was shown by the relative incidence of casualties in different units subject to comparable stress. It was repeatedly found that certain units within a battalion, regiment or division ran consistently higher or lower casualty rates than their neighboring units. As the distribution of vulnerable persons was similar in all organizations, the disproportionate incidence of psychiatric breakdown could not be attributed to disparities in that respect. The only tenable explanation was that the difference was owing to the influence of the group or combat unit which could offer realistic protection against external fear. The soldier did not fight alone. He had his buddies by him who shared his dangers and privations, and who he knew would help him if he were disabled. The more confidence he had in his platoon or company the less fearful

was the battle situation. But in civilian population this sort of support is more difficult to achieve. To bring it about, people must be organized into close units and trained to meet disaster. Unless a close working together of the smallest units in a community is fostered, the feeling of helpless isolation and inability to cope with the situation will add to the already heavy emotional burden all must bear. This in turn will increase the incidence of mental breakdown.

It seems clear that transient breakdown of the personality under stress depends on much more than an individual's capacity to stand fear and the realistic danger in which he finds himself. Group identification begins for a soldier in training, and it is here that the two important life-sustaining qualities should emerge. It is here that he gains confidence in the use of his weapons, and it is here that he learns the value of teamwork in battle. Thus the foundation for his own safety lies in the protective functioning of the unit. The life of the group *is* his personal life. It was frequently seen during the last war that even a timid soldier came to feel more secure by being in a powerful group, and often assumed the aggressive attitude of the whole organization. A leader sets the standard and motivation for his organization by example and behavior. The poor leader is quickly recognized by his men for inept management and unfair treatment, and a higher proportion of emotional casualties is to be expected in his command. In preparation for civil disaster, unless capable leaders are provided down to the very smallest grass roots, there will be a feeling of utter helplessness on the part of many. Adequate preparation and selection of suitable leaders is the outstanding epidemiological consideration in the problem of dealing with disaster.

HANDLING NEUROPSYCHIATRIC CASUALTIES

It is, of course, impossible to predict with any supposition of accuracy what the total psychiatric reactions would amount to. It would appear that in the beginning the vast majority of people will experience some panic, bewilderment and numbness which prevents them from taking in all the implications of what they have been through. These reactions will be recognized for what they are by all physicians and for the most part they are not to be considered a medical problem. Such symptoms as unwarranted aggressiveness, flight and fury will be dealt with by civilian or military authorities. No doubt many people will be concerned about how much radiation they have received, and may have all kinds of somatic symptoms that are connected in their minds with the effects of a presumed overdose of radiation. These reactions can be dealt with quite effectively by any physician. There will, of course, be the anxious, hypochondriacal people to whom all reassurance is futile. In all probability these people will simply have to be turned away. There may be some bizarre syndromes such as the precipitation of psychoses, severe depression and the like. Some persons with such reactions, unless they become violent, could be watched carefully by family or friends. It was by no means rare during World War II to see persons who were considered schizophrenic, owing to the severity of personality disorganization, emerge completely from the psychotic-like state within days or even a few hours. The phenomenon was sometimes given the name "three-day schizophrenia." In disaster, evacuation of persons so affected would have to be through medical channels.

After the worst of the initial confusion has passed, some persons will be observed to have been psychically damaged to a degree greater than any ascribable to normal reaction to fear. It is then that the services of a psychiatrist will be most useful. Within any given community floating teams of psychiatric personnel could be organized. Ambulances or trucks could be assigned for this purpose. The personnel could consist of a psychiatrist, a driver and two or three attendants. Syringes and sedatives would be needed for the transport of very excited patients. These teams should have access to a special neuropsychiatric center outside the immediate disaster area. Here patients would be retained who could be effectively treated in a short period of time by such methods as heavy sedation and group psychotherapy. All efforts should be directed toward getting back to work as quickly as possible. It might even be that work parties could be organized among recovered patients at such a center. Patients who could not be expected to respond to short-term therapy, say two or three days, would have to be further evacuated to a more permanent kind of installation, perhaps even augmented units attached to state hospitals.

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